CLAIMS

1. A process for producing a cold-rolled ferritic/martensitic dual-phase steel strip, wherein a slab, the chemical composition of which comprises, by weight:

$0.010\% \leq C \leq 0.100\%$
$0.050\% \leq Mn \leq 1.0\%$
$0.010\% \leq Cr \leq 1.0\%$
$0.010\% \leq Si \leq 0.50\%$
$0.001\% \leq P \leq 0.20\%$
$0.010\% \leq Al \leq 0.10\%$
$N \leq 0.010\%$

the balance being iron and impurities resulting from the smelting, is hot rolled, said process then comprising the steps consisting in:

- coiling the hot-rolled strip obtained at a temperature of between 550 and 850°C; then
- cold rolling the strip with a reduction ratio of between 60 and 90%; then
- annealing the strip continuously in the intercritical range; and
- cooling it down to the ambient temperature in one or more steps, the cooling rate between 600°C and the ambient temperature being between 100°C/s and 1500°C/s; and
- optionally tempering it at a temperature below 300°C,

the annealing and cooling operations being carried out in such a way that the strip finally contains from 1 to 15% martensite.

2. The process as claimed in claim 1, wherein the chemical composition of the steel comprises:

$0.020\% \leq C \leq 0.060\%$
$0.300\% \leq Mn \leq 0.500\%$
$0.010\% \leq Cr \leq 1.0\%$

$0.010\% \leq Si \leq 0.50\%$
$0.010\% \leq P \leq 0.100\%$
$0.010\% \leq Al \leq 0.10\%$
$N \leq 0.010\%$

the balance being iron and impurities resulting from the smelting.

3. The process as claimed in either of claims 1 and 2, wherein the strip is hot rolled at a temperature above 850°C.

4. The process as claimed in any one of claims 1 to 3, wherein the strip is hot rolled at a temperature of between 550 and 750°C.

5. The process as claimed in any one of claims 1 to 4, wherein the strip is cold rolled with a reduction ratio of between 70 and 80%.

6. The process as claimed in any one of claims 1 to 5, wherein the continuous annealing of the cold-rolled strip comprises a temperature rise phase followed by a soak phase at a predetermined temperature.

7. The process as claimed in claim 6, wherein the soak temperature is between Ac_1 and 900°C.

8. The process as claimed in claim 7, wherein the soak temperature is between 750 and 850°C.

9. The process as claimed in any one of claims 1 to 8, wherein the cooling down to the ambient temperature comprises a first, slow cooling step between the soak temperature and 600°C, during which the cooling rate is less than 50°C/s, followed by a second cooling step at a higher rate, of between 100°C/s and 1 500°C/s, down to the ambient temperature.

10. The process as claimed in claim 9, wherein the

second cooling step is carried out by water quenching.

11. The process as claimed in any one of claims 1 to 8, wherein the cooling is carried out in a single operation at a cooling rate of between 100°C/s and 1500°C/s.

12. The process as claimed in claim 11, wherein the cooling is carried out by water quenching.

13. A cold-rolled ferritic/martensitic dual-phase steel strip, the chemical composition of which comprises, by weight:

$0.010\% \leq C \leq 0.100\%$
$0.050\% \leq Mn \leq 1.0\%$
$0.010\% \leq Cr \leq 1.0\%$
$0.010\% \leq Si \leq 0.50\%$
$0.001\% \leq P \leq 0.20\%$
$0.010\% \leq Al \leq 0.10\%$
$N \leq 0.010\%$

the balance being iron and impurities resulting from the smelting, the strip furthermore containing between 1% and 15% martensite.

14. The steel strip as claimed in claim 13, the chemical composition of which furthermore comprises:

$0.020\% \leq C \leq 0.060\%$
$0.300\% \leq Mn \leq 0.500\%$
$0.010\% \leq Cr \leq 1.0\%$
$0.010\% \leq Si \leq 0.50\%$
$0.010\% \leq P \leq 0.100\%$
$0.010\% \leq Al \leq 0.10\%$
$N \leq 0.010\%$

the balance being iron and impurities resulting from the smelting.

15. The steel strip as claimed in either of claims 13 and 14, which has a tensile strength R_m of greater than 450 MPa.

16. The steel strip as claimed in claim 15, which has a tensile strength R_m of greater than 500 MPa.

17. The steel strip as claimed in claim 16, further which has a tensile strength R_m of greater than 600 MPa.

18. The steel strip as claimed in any one of claims 13 to 17, which has a mean anisotropy coefficient r of greater than 1.1.

19. The steel strip as claimed in claim 18, further which has a mean anisotropy coefficient r of greater than 1.3.

20. The steel strip as claimed in any one of claims 13 to 19, which furthermore contains between 1% and 10% martensite.

21. The steel strip as claimed in claim 20, which furthermore contains between 5% and 8% martensite.

22. The use of a steel strip as claimed in any one of claims 13 to 21 for the production of automobile parts by deep drawing.